

Features

Regulated Converters

- Compact 40W AC-DC Power Supply
- Universal Input Voltage Range
- 4000VAC Isolation, Low Leakage Current
- Low Output Ripple and Noise
- Short Circuit Protected
- Triple Output with Independent Outputs
- UL-60601 Certified for Medical Applications
- CE Marked

Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load
RAC40-3.3SA	90-264	3.3	8000	76	70000µF
RAC40-05SA	90-264	5	8000	79	33000µF
RAC40-12SA	90-264	12	3333	83	4000µF
RAC40-15SA	90-264	15	2666	83	3000µF
RAC40-24SA	90-264	24	1667	83	1200µF
RAC40-05DA	90-264	±5	±4000	80	±6000µF
RAC40-12DA	90-264	±12	±1666	83	±1000µF
RAC40-15DA	90-264	±15	±1333	83	±2000µF
RAC40-0512DA	90-264	5/12	5000/1250	80	15000/750µF
RAC40-0512TA	90-264	5/±12	+5000/±600	79	18000/±150µF
RAC40-0515TA	90-264	5/±15	+5000/±500	79	18000/±400µF

*add suffix "-E" for extended temperature range, e.g. RAC40-05SA-E

*add suffix "-ST" for screw terminal module e.g. RAC40-05SA-ST, RAC40-05DA-ST, RAC40-0512TA-ST

Specifications (typical at 25°C and after warm up time unless otherwise specified)

Input Voltage Range	90-264VAC or 100-370VDC	
Rated Power	40 Watts max.	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	860mA/ 460mA max.
No Load Power Consumption	115VAC/230VAC	720mW max.
Inrush Current (<2ms)	115VAC/230VAC	10A / 20A max.
Leakage Current	115VAC/230VAC	100µA/ 200µA max.
Output Voltage Accuracy (Full load)	Single, Dual Outputs ±2% typ.	
(note 2)	Others: Main Output ±3% typ., Secondary Output(s) ±5% typ.	
Line Voltage Regulation (low line, high line at full load)	Single, Dual Outputs ±0.5% typ.	
	Double&Triple: Main Output ±0.5% typ., Secondary Output(s) ±5% typ.	
Load Voltage Regulation (10% to 100% symmetric load)	Single, Dual Outputs ±1% typ.	
	Double: Main Output 2% typ., Secondary Output 6% typ.	
	Triple: Main Output ±3% typ., Secondary Output(s) ±7% typ.	
Cross Regulation	Dual	±5% typ.
	Double	Main Output 1%, Secondary Output 7% typ.
	Triple	Main Output ±3%, Secondary Output ±7% typ.
Output Ripple and Noise	3.3V Output	50mVp-p max.
(20MHz limited, 0.1µF and 47µF across outputs)	Others	1% Vout max.
Operating Frequency	132kHz typ.	
RMS Isolation Voltage (input to output)	4kVAC / 1 minute	
Temperature Coefficient	±0.01%/°C typ.	
Isolation Resistance	100 MΩ min.	
Short Circuit Protection	Continuous, Automatic Restart	
Overcurrent Protection	105% typ.	
Over Temperature Protection	100°C	
Operating Temperature Range	Standard	-25°C to +70°C
(free air convection, with derating)	Suffix -E	-40°C to +70°C
Storage Temperature Range	-40°C to +100°C	
Humidity	95% max.	

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POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

40 Watt Single/Dual, Double & Triple Output



UL-60601-1 Certified

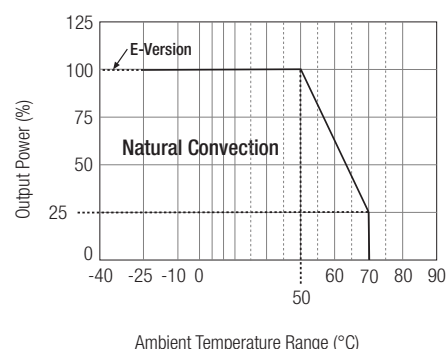
RAC40-A

Description

Compact switching power module for PCB or DIN-rail mounting with medical certification UL-60601-1.

Derating Graph

(Ambient Temperature)



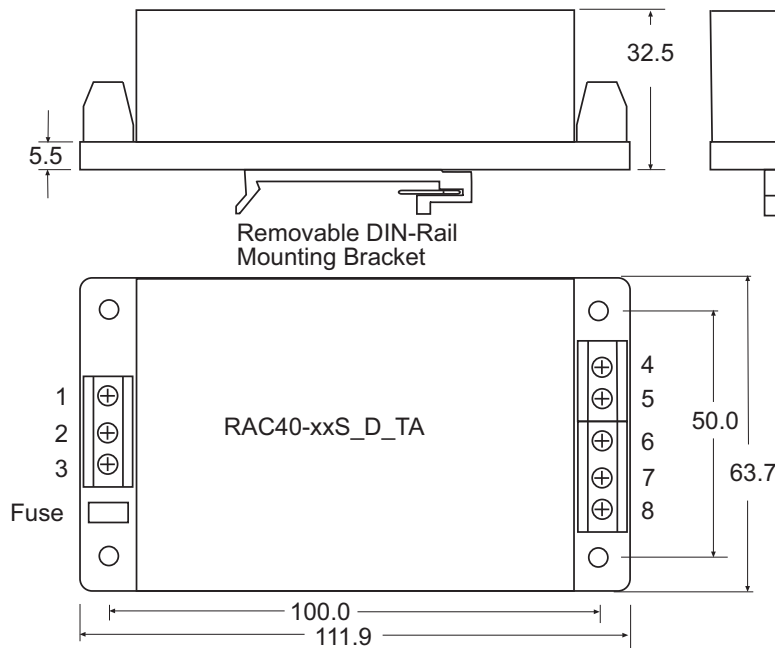
Please Read Application Notes

www.recom-electronic.com

Specifications continued

Case Material	Epoxy with Fibreglass (UL94V-0)
Package Weight	280g
suffix (-ST)	300g
Packing Quantity	5 pcs (-ST Version: 1 pc)
EMC	EN 55011 Class B / EN60601-1-2
MTBF (+25°C)	using MIL-HDBK-217F 200~400 x 10 ³ hours

Screw Terminal Module Option (suffix -ST)

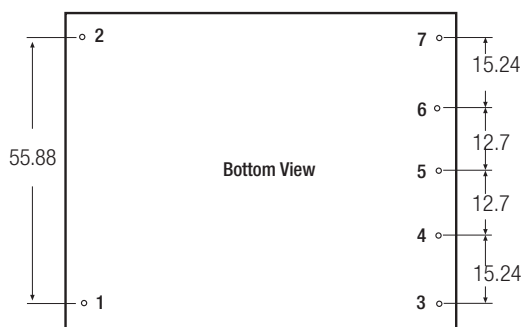
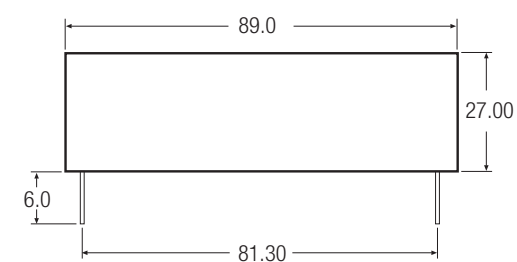


Pin Connections

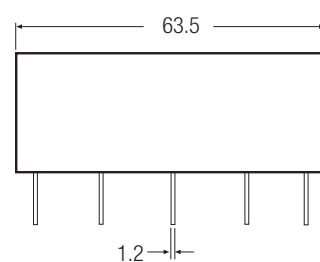
Pin #	Single Out	Dual Out	Double Out	Triple Out
1	NC	NC	NC	NC
2	VAC in (L)	VAC in (L)	VAC in (L)	VAC in (L)
3	VAC in (N)	VAC in (N)	VAC in (N)	VAC in (N)
4	+VDC out	+VDC out	+12V Out	+VDC out
5	NC	NC	+5V Out	+5V Out
6	-VDC out	Com	+12V Rtn	Com
7	NC	NC	+5V Rtn	+5V Rtn
8	NC	-VDC out	NC	-VDC out

NC = No Connection

Package Style and Pinning



Tolerance = ± 0.5 mm



Pin Connections

Pin #	Single Out	Dual Out	Double Out	Triple Out
1	VAC in (L)	VAC in (L)	VAC in (L)	VAC in (L)
2	VAC in (N)	VAC in (N)	VAC in (N)	VAC in (N)
3	+VDC out	+VDC out	+12V Out	+VDC out
4	No Pin	No Pin	+5V Out	+5V Out
5	-VDC out	Com	+12V Rtn	Vout Com
6	No Pin	No Pin	+5V Rtn	+5V Rtn
7	NC	-VDC out	No Pin	-VDC out

Notes

Note 1: Suggested input fuse rating 3.15A Slow Blow.

Note2: Triple output version has +/-Vout common that is not connected to +5V Return pin internally.